ABSTRACT

Systems and methods for performing congestion detection and connection admission control for a communications network utilizing the observed one-way delay of packets transmitted through the network are described. Embodiments of the present invention provide endpoints on the network, which can anticipate congestion accurately enough to prevent packet loss and excess delay while, at the same time, fully utilizing network resources. In one embodiment of the present invention, a communications service provider replaces conventional tandem switches in a public switched telephone network with Internet protocol (IP) tandems. The IP tandem includes a media gateway, which performs congestion admission control for voice over IP (VoIP) communications. When delay in the communications network exceeds a delay threshold, the media gateway may reject the communications request or may route the request over an alternative channel.

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